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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/696,139	10/25/2000	Robert A. Sanderson	09850-005005	2871

7590 05/22/2002  
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EXAMINER

KAMEN, NOAH P

ART UNIT	PAPER NUMBER
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3747

DATE MAILED: 05/22/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/696,139

Applicant(s)

SANDERSON ET AL.

Examiner

Noah Kamen

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3747

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 45-82 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 45-47, 49, 50, 54-62 and 66-82 is/are rejected.
- 7) ☒ Claim(s) 48, 52, 53 and 63-65 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 14.
- 4) ☐ Interview Summary (PTO-413) Paper No(s): \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 45-47, 49, 50, 54-62, 66-68, 72, 73, and 77-82 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kitaguchi (5,007,385) in view of Lind (UK 220,594).

Kitaguchi shows in figure 5 a transition arm 3 supported on a stationary support via universal joint 4. While figure 5 shows only a single ended piston, figure 2 shows a double ended piston. The claimed joint and guide rod are not shown. Lind shows the recited joint absent the sliding members. It would have been obvious to one of ordinary skill in the art to substitute the joint of Lind for any joint in Kitaguchi for efficiently transferring forces. The modification of replacing a piston with a guide rod is well within the abilities for one of ordinary skill in the art. The sliding members read on low friction surface treatments such as nitriding. In regard to claim 81, the pump reads on an oil pump. In regard to claim 82, the compressor reads on a supercharger which is a well known expedient for increasing power output.

Claim 51 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kitaguchi in view of Lind as applied to claim 45 above, and further in view of Whatley (1,577,010). To modify Kitaguchi to have drive arms able to rotate about their axis for lower friction would have been obvious to one of ordinary skill in the art in view of Whatley.

Claims 69-76 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kitaguchi in view of Almen (RE15,442).

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Kitaguchi shows in figure 5 a transition arm 3 supported on a stationary support via universal joint 4. While figure 5 shows only a single ended piston, figure 2 shows a double-ended piston. The claimed joint is not shown. Almen shows the recited joint in figure 3. It would have been obvious to one of ordinary skill in the art to substitute the joint of Almen for any in Kitaguchi for efficiently transferring forces.


***Allowable Subject Matter***

Claims 48, 52, 53, and 63-65 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Noah Kamen whose telephone number is 703 308 1945. The examiner can normally be reached on M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Mancene can be reached on 308 2696. The fax phone numbers for the organization where this application or proceeding is assigned are 703 872 9302 for regular communications and 703 308 7766 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308 0861.

  
Noah Kamen  
Primary Examiner  
Art Unit 3747

nk  
May 8, 2002